CLAIMS

1. A paste type positive electrode for an alkaline storage battery containing a first active material and a second active material,

wherein said first active material comprises X parts by weight of particulate nickel hydroxide with aX/100 parts by weight of cobalt oxyhydroxide carried thereon, and said second active material comprises Y parts by weight of particulate nickel oxyhydroxide, of which an oxidation number of nickel is α, with bY/100 parts by weight of cobalt oxyhydroxide carried thereon,

all the following relations being satisfied:

(1) $2.5 \leq \alpha < 3.0$

(2) $0.01 \leq (aX/100 + bY/100) / (X+Y) \leq 0.20$

(3) $0 < b \leq a \leq 10$ or $0 = b < a \leq 10$

(4) $2.1 \leq (2X + \alpha Y) / (X+Y) < 2.2$

2. A paste type positive electrode for an alkaline storage battery containing a first active material, a second active material and a cobalt hydroxide powder,

wherein said first active material comprises X parts by weight of particulate nickel hydroxide with aX/100 parts by weight of cobalt oxyhydroxide carried thereon, and said second active material comprises Y parts by weight of particulate nickel oxyhydroxide, of which an oxidation number of nickel is α, with bY/100 parts by weight of cobalt oxyhydroxide carried thereon,

a quantity of said cobalt hydroxide powder being c parts

by weight and all the following relations being satisfied:

(1) $2.5 \leq \alpha < 3.0$

(2') $0.01 \leq (aX/100 + bY/100 + c) / (X+Y) \leq 0.20$

(3) $0 < b \leq a \leq 10$ or $0 = b < a \leq 10$

(4') $2.1 \leq (2X + \alpha Y + 2c \times 288/289) / (X+Y) < 2.2$

3. A paste type positive electrode for an alkaline storage battery containing a first active material, a second active material and a cobalt oxyhydroxide powder,

wherein said first active material comprises X parts by weight of particulate nickel hydroxide with aX/100 parts by weight of cobalt oxyhydroxide carried thereon, and said second active material comprises Y parts by weight of particulate nickel oxyhydroxide, of which an oxidation number of nickel is α, with bY/100 parts by weight of cobalt oxyhydroxide carried thereon,

a quantity of said cobalt oxyhydroxide powder being d parts by weight and all the following relations being satisfied:

(1) $2.5 \leq \alpha < 3.0$

(2") $0.01 \leq (aX/100 + bY/100 + d) / (X+Y) \leq 0.20$

(3) $0 < b \leq a \leq 10$ or $0 = b < a \leq 10$

(4) $2.1 \leq (2X + \alpha Y) / (X+Y) < 2.2$

4. The paste type positive electrode in accordance with claims 1, wherein at least one of said particulate nickel hydroxide and said particulate nickel oxyhydroxide is a solid solution containing at least one selected from the group consisting of cobalt, zinc, cadmium, magnesium, calcium,

manganese, and aluminum.

5. The paste type positive electrode in accordance with claims 2, wherein at least one of said particulate nickel hydroxide and said particulate nickel oxyhydroxide is a solid solution containing at least one selected from the group consisting of cobalt, zinc, cadmium, magnesium, calcium, manganese, and aluminum.

6. The paste type positive electrode in accordance with claims 3, wherein at least one of said particulate nickel hydroxide and said particulate nickel oxyhydroxide is a solid solution containing at least one selected from the group consisting of cobalt, zinc, cadmium, magnesium, calcium, manganese, and aluminum.

7. The paste type positive electrode in accordance with claims 1, wherein an oxidation number of cobalt in said cobalt oxyhydroxide included in said first active material and said second active material is greater than 3.

8. The paste type positive electrode in accordance with claims 2, wherein an oxidation number of cobalt in said cobalt oxyhydroxide included in said first active material and said second active material is greater than 3.

9. The paste type positive electrode in accordance with claims 3, wherein an oxidation number of cobalt in said cobalt oxyhydroxide included in said first active material and said second active material is greater than 3.

10. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 1, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case.

11. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 2, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case.

12. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 3, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case.

13. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 1, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case,

wherein a discharge capacity of said negative electrode is greater than a discharge capacity of said positive electrode but not greater than 1.1 times as large as a discharge capacity of said positive electrode when said battery, which is in a completely charged condition and is supposed to have a nominal

capacity at 1 C rate, is continuously discharged at an electric current of 0.2 to 5 C rate until a potential of said negative electrode becomes -0.6 V and a potential of said positive electrode becomes -0.1 V with respect to a mercury electrode.

14. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 2, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case,

wherein a discharge capacity of said negative electrode is greater than a discharge capacity of said positive electrode but not greater than 1.1 times as large as a discharge capacity of said positive electrode when said battery, which is in a completely charged condition and is supposed to have a nominal capacity at 1 C rate, is continuously discharged at an electric current of 0.2 to 5 C rate until a potential of said negative electrode becomes -0.6 V and a potential of said positive electrode becomes -0.1 V with respect to a mercury electrode.

15. A nickel-metal hydride storage battery comprising a paste type positive electrode in accordance with claims 3, a negative electrode comprising a hydrogen storage alloy, a separator, an aqueous alkaline electrolyte, a sealing plate having a safety valve, and a battery case,

wherein a discharge capacity of said negative electrode is greater than a discharge capacity of said positive electrode

but not greater than 1.1 times as large as a discharge capacity of said positive electrode when said battery, which is in a completely charged condition and is supposed to have a nominal capacity at 1 C rate, is continuously discharged at an electric current of 0.2 to 5 C rate until a potential of said negative electrode becomes -0.6 V and a potential of said positive electrode becomes -0.1 V with respect to a mercury electrode.